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600 14TH STREET, NW, SUITE 800
WASHINGTON, D.C. 20005-2004
TELEPHONE (202) 783-8400 ■ FACSIMILE (202) 783-4211

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**FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY**

February 22, 2001

VIA HAND DELIVERY

Magalie Salas Roman, Esq.
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W., Room TW-A325
Washington, D.C. 20554

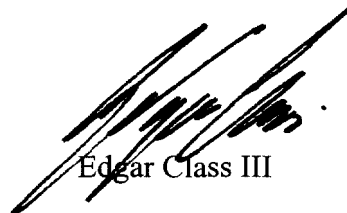
Re: **Comments**
ET Docket No. 00-258/
Eureka College and the Illinois ITFS Educators

Dear Ms. Salas:

On behalf of Eureka College and the Illinois ITFS Educators, please accept an original, four copies, and a stamp-return copy of the attached Comments in ET Docket No. 00-258. These Comments are filed in response to the *Notice of Proposed Rule Making*, which was released on January 5, 2001.

If you have any questions, please contact the undersigned at (202) 639-5639. Thank you for your attention to this matter.

Respectfully submitted,



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cc: James T. Flynn, Jr.

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**FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY**

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Amendment of Part 2 of the Commission's Rules to)	
Allocate Spectrum Below 3 GHz for Mobile and)	ET Docket No. 00-258
Fixed Services to Support the Introduction of New)	
Advanced Wireless Services, including Third)	
Generation Wireless Systems)	

To the Commission:

**COMMENTS OF
EUREKA COLLEGE AND THE
ILLINOIS ITFS EDUCATORS**

Mr. James T. Flynn, Jr.
Chief Financial Officer
Eureka College
300 East College Avenue
Eureka, IL 61530
Tel: 309-467-6306
Fax: 309-467-6304

February 22, 2001

SUMMARY

Eureka College and the Illinois ITFS Educators urge the Commission to refrain from relocating, reallocating, segmenting, or otherwise disrupting the existing spectrum licenseholders and operators of the ITFS/MDS band in favor of 3G services. Any proposed changes to the ITFS/MDS band would violate congressional mandates, educational priorities of the Bush Administration, spectrum rights of existing licensees and operators of the ITFS/MDS band, as well as the Commission's own precedents. Existing cellular and other alternative spectrum the Commission has already identified for possible reallocation to 3G service is at the Commission's disposal, provides a less discriminatory alternative, and avoids the host of legal, political, and policy dilemmas that would arise from revamping the ITFS/MDS band.

The Commission has a mandate to safeguard and encourage broadband deployment to rural America, including all schools therein. Any alteration of the ITFS/MDS allocation and existing usage by educational institutions and their MDS partners would annihilate the current and expanded benefits ITFS/MDS services provide in bridging the educational divide that separates many rural schools from their urban counterparts. Consequently, any reallocation of the ITFS/MDS band to 3G services would be counter to the Bush Administration's top priority of ensuring that "no child is left behind" in either urban or rural America.

Because the Commission previously allocated the ITFS/MDS band to provide advanced wireless services currently available and provided over this spectrum, the Commission cannot decide now to sacrifice one advanced wireless service merely to substitute another, here 3G.

Doing so would be discriminatory and would constitute a technical preference in violation of the Commission's proscription against such action.

Because of this existing use, the Commission also cannot require sharing of the band with 3G service because doing so is not possible from a technical standpoint, as already identified in the Commission staff's own *Interim Report*.

Relocation is also not an option. The Commission cannot displace current ITFS/MDS operations without moving them to comparable spectrum. Only spectrum below 3 GHz provides propagation characteristics similar to current use that will allow the same coverage area necessary for reaching rural areas, including classrooms and students' homes. No unencumbered, contiguous spectrum block below 3 GHz and of the same bandwidth is available for relocation of ITFS/MDS.

Finally, Commission precedent would preclude any attempt to disrupt the current and planned ITFS/MDS operations. In reliance on the Commission and its two-way proceedings, the ITFS community has been working with its MDS partners to redevelop the spectrum for two-way fixed broadband usage, including system reengineering and filing of applications. These reengineered ITFS/MDS systems are the only hope the State of Illinois has for ensuring that enhanced educational opportunities are extended to every corner of the state.

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**Before the
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To the Commission:

**COMMENTS OF
EUREKA COLLEGE AND THE
ILLINOIS ITFS EDUCATORS**

Eureka College and the Illinois ITFS Educators listed on the attached Appendix A (collectively, the "Educators") hereby submit their joint comments on the *Notice of Proposed Rulemaking* ("Notice") in the above-captioned proceeding.¹ All of the Educators are licensees or applicants for ITFS stations, and some have held licenses and operated ITFS systems for many years. In this proceeding, the Commission seeks to allocate spectrum for new advanced wireless services, including third generation ("3G") wireless services. Among other candidate bands, the Commission seeks comment on the use of spectrum currently licensed to Instructional Television Fixed Service ("ITFS"), Multichannel Multipoint Distribution Service ("MMDS"), and Multipoint Distribution

¹ Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Services, including Third Generation Wireless Systems, *Notice of Proposed Rulemaking*, FCC 00-455 (rel. January 5, 2001) ("Notice").

Service (“MDS”)² in the 2150 – 2162 MHz and 2500-2690 MHz bands (“ITFS/MDS band”) for the provision of advanced wireless services. For all of the reasons below, the Educators urge the Commission not to reallocate any portion of the ITFS/MDS spectrum for 3G.

I. Incumbent Use of the ITFS/MDS Band is Necessary to Ensure that “No Child is Left Behind” in Illinois or the Rest of the United States.

President George W. Bush has stated that his “administration has no greater priority than education” and that every child in the United States should have access to a quality education.³ In his educational reform plan, President Bush encourages schools to “use technology as a tool to improve academic achievement.”⁴

Many of the Educators rely on ITFS to provide the infrastructure for a substantial portion of their distance learning activities. Using ITFS/MDS spectrum, the Educators transmit prerecorded and live programming to schools, community centers, and adult learning facilities, many of which are in remote and isolated locations which cannot receive service by any other means. Because of ITFS, students and adult learners in rural and traditionally underserved areas have access to the same educational opportunities as those in better served metropolitan areas.⁵ Students and teachers in

² All references to MDS contained herein also include MMDS.

³ Remarks by the President at Swearing-in Ceremony for Dr. Roderick Paige as Secretary of Education, Dept. of Education, Washington D.C. (Jan. 24, 2001), <http://www.whitehouse.gov/news/releases/20010124-3.html>.

⁴ President George W. Bush, *No Child Left Behind* (Jan. 23, 2001) at 22, <http://www.whitehouse.gov/news/reports/no-child-left-behind.pdf>.

⁵ Without distance learning programs and newer educational learning programs geared for

these traditionally underserved areas are freed from the need to travel great distances to meet face-to-face, saving time and money and conserving resources. In urban areas, ITFS gives students in all school districts access to the latest instructional materials at all levels, helping to even the playing field and promote learning opportunities. ITFS also helps schools leverage their instructional materials and teachers by making both accessible to a much larger number of students than would otherwise be possible.

While the above description of how the ITFS/MDS band is being used is important, it is primarily of historical interest for purposes of the *Notice*. What is of crucial importance and decisional significance for the Commission is the *new* use of ITFS resulting from Commission actions over the past few years to grant increased flexibility to ITFS licensees and their commercial partners in the way they collectively use the ITFS/MDS band.⁶

The Commission has a mandate from Congress to ensure the deployment of advanced telecommunications services to both schools and homes throughout rural America in order to bridge the digital divide.⁷ Rural schools without broadband access are deprived of the global resources

two way broadband Internet connections over ITFS/MDS, students in primarily rural areas would be deprived of access to the full college preparatory curriculum every student should have.

⁶ Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Two-Way Transmissions, *Report and Order*, 13 FCC Rcd 19112 (1998), *recon.*, 14 FCC Rcd 12764 (1999), *further recon.*, 15 FCC Rcd 14566 (2000) (“*Two-Way Order*”).

⁷ See 47 U.S.C. § 254(b)(3) (“Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services, including...advanced telecommunications

available through the Internet and, as a result, slip farther behind schools in urban areas that do have access. An example of the educational impact of the urban-rural dichotomy was vividly described in a recent government report: “[A] student with one megabit/second broadband access at home could conduct a one hour virtual tour of the Louvre in real-time from her own living room, while a child with a 28 kilobit/second modem would require 36 hours to download the same information.”⁸

Thanks to the Commission’s decision to allow two-way use of the ITFS/MDS band, the opportunities for the ITFS/MDS band to bridge the educational divide have increased dramatically. Advanced fixed broadband technologies, engineered for use over the ITFS/MDS band, will support streaming video and video-on-demand, as well as interactive classroom applications such as videoconferencing and high-speed Internet access. In reliance on the FCC’s *Two-Way Order*, the Educators have been working with their commercial partners to deploy ITFS-based information systems and content for the twenty-first century classroom. Through these efforts, Illinois will be able to achieve the vision of President Bush.

and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.”); *see also* 47 U.S.C. § 254(h)(2) (“The Commission shall establish competitively neutral rules to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and nonprofit elementary and secondary school classrooms...”).

⁸ U.S. Department of Commerce and U.S. Department of Agriculture, *Advanced Telecommunications in Rural America, The Challenge of Bringing Broadband Service to All Americans* (April 2000) at 2 (“*Advanced Telecommunications in Rural America*”).

II. Reallocation of the ITFS/MDS Band to Accommodate Advanced Wireless Services is Unnecessary Because the Band is Currently Being Used in This Capacity.

The Commission seeks comment on the use of ITFS/MDS spectrum for advanced wireless services.⁹ As a threshold matter, it should be emphasized that the ITFS/MDS spectrum is *already* being used for advanced wireless services. As the Commission defines the term, “advanced wireless services” includes data and broadband services provided over fixed networks.¹⁰ The Commission’s *Two-Way Order* gives ITFS licensees the flexibility to provide *any* voice, data, or video service to and from fixed locations, including high-speed two-way services such as broadband Internet access.¹¹

The ITFS/MDS spectrum, then, is already capable of supporting all services except those mobile applications that may fall under the advanced wireless services umbrella. Specifically with regard to 3G mobile applications, the proposals in the *Notice* fall into two broad categories: (i) proposals to share or segment the ITFS/MDS spectrum in a way that would permit 3G mobile services to coexist with ITFS; and (ii) proposals to relocate ITFS and or MDS licensees to other spectrum to clear the band for 3G mobile services. As demonstrated below, neither course of action is wise or feasible. The Commission instead should place 3G services in one or more of the other bands identified in the *Notice*.

⁹ *Notice* at ¶ 62.

¹⁰ *Notice* at ¶ 1.

¹¹ *See Report and Order* in MM Docket No. 97-217 at ¶ 6 (1996).

III. 3G Mobile Service Cannot Coexist with ITFS/MDS in the Same Frequency Band.

The Commission seeks comment on whether a mobile allocation can be grafted onto the ITFS/MDS band as it is currently constituted.¹² Although the Educators do not seek this additional flexibility at present, they have no objection to flexible use in principle, provided that it can be accomplished in a way that protects the existing fixed uses for which the Educators have an ongoing need.

The Two-Way Order was carefully engineered around the enormously difficult technical complexities associated with sharing spectrum between downstream and upstream operations. The rule making process succeeded, in part, due to the restriction of upstream transmitters to fixed locations. If upstream transmitters in the band are allowed to roam, protection of fixed receive sites at the schools, community centers, and hospitals to which ITFS materials are transmitted from distant locations may be jeopardized without extensive further review and modification of the existing fixed two-way rules, all of which could lead to additional delay in the deployment of advanced telecommunications services over the ITFS/MDS band.¹³

IV. ITFS Licensees Cannot be Relocated to Other Spectrum in Order to Make Way for 3G Mobile Services.

The *Notice* also seeks comment on the possibility of relocating incumbents as a way to clear the band, or portions of the band, for 3G mobile operations.¹⁴ The propagation characteristics

¹² *Notice* at ¶ 64.

¹³ Interim Report at 53.

¹⁴ *Notice* at ¶ 65.

necessary for the Educators and their commercial partners to conduct existing and planned operations in the ITFS/MDS bands cannot be met above 3 GHz due to the decreased coverage area. Therefore, in order to relocate the entire ITFS/MDS band to comparable spectrum, the Commission would have to find a contiguous 190 MHz block of spectrum below 3 GHz. The Educators are aware of no such block of spectrum. Furthermore, vendors would have to reengineer equipment to operate at the reassigned frequencies, possibly halting any research, development, and support of equipment for the existing ITFS/MDS band while they design and test new equipment for use on reassigned frequencies at a deployment date that today cannot be ascertained.

An alternative would be to relocate only part of the ITFS/MDS band. This would necessarily involve the relocation of individual licensees or smaller blocks of spectrum. However, relocation of ITFS licensees in this manner would be disastrous for the Educators. As explained below, such action would result in the demise of ITFS as envisioned by the Commission because piecemeal relocation would disrupt and likely terminate the commercial partnerships that the Commission has gone to great lengths to encourage.

In the 1980s, the Commission took the unusual and creative step of permitting ITFS licensees to lease their excess transmission capacity to commercial service providers.¹⁵ As the Commission correctly foresaw, the result was an explosive growth in the deployment of ITFS systems and utilization of ITFS by educators. Whereas previously, applications had trickled in at the rate of only

¹⁵ *Report and Order* in Gen. Docket No. 80-112, 94 F.C.C.2d 1203, 1249-50 (¶ 114) (1983).

five per year,¹⁶ by 1991 the Commission was receiving more than 400 applications per year, and the number was doubling each year.¹⁷ Over 90 percent of these applications contained excess capacity leases which provided critical funding for the ITFS facilities and educational activities of the licensees.¹⁸

The partnership between ITFS and wireless cable was ideal in many respects. At the outset, educators needed one-way video distribution to classrooms and other learning centers, and “wireless cable” was perfectly suited to provide the facilities and services that distance learning required. Today, educators need more than one-way video. They need broadband Internet access in the classroom, interactive video and videoconferencing, and wide-area networking. Fortunately, the wireless communications industry has also matured, and is focused now on the delivery of two-way services and broadband Internet access, thus retaining an ideal fit with the needs of educators. Thanks to the Commission’s foresight and the cooperative efforts of ITFS licensees and their commercial partners, ITFS is poised to be an important educational resource in the twenty-first century.

Relocating ITFS incumbents to make way for 3G services on a site-by-site basis or in piecemeal spectrum blocks would necessarily disrupt the carefully crafted partnerships between ITFS

¹⁶ *Notice of Proposed Rule Making, supra*, 48 Fed. Reg. 29553 at ¶ 10.

¹⁷ Amendment of Part 74 of the Commission’s Rule With Regard to the Instructional Television Fixed Service, *Notice of Proposed Rule Making*, 8 FCC Rcd 1275, 1276 (¶ 5) (1993).

¹⁸ *Id.*

licensees and commercial system operators. The result would be to undo the progress that has been made in the last twenty years, and render the service virtually worthless to educators – and more importantly, to students. For just as it was twenty years ago, all the technology in the world is of no use without the financial resources to construct, operate, and maintain information systems and invest in meaningful content. Educators do not have the financial and technical resources to bring broadband to the school without the technical, financial, and operational support of the MDS operators and their added bandwidth that makes the system work. The symbiotic relationship with the MDS operator ensures delivery of broadband not only to rural schools, but rural communities as well.

V. The Commission Should Allocate Spectrum For 3G Without Disturbing the ITFS/MDS Band.

There is no need for the Commission to engage in the difficult and lengthy administrative process that would surround any attempt to share the ITFS/MDS band between fixed and mobile services or to relocate fixed incumbents to make way for mobile uses. The *Notice* identifies approximately 265 MHz of spectrum that can be allocated to 3G mobile uses.¹⁹ Accordingly, there

¹⁹ See *Notice* at ¶ 37 (120 MHz in 1850-1910/1930-1990 MHz band); ¶ 38 (60 MHz in 746-806 MHz band); ¶ 41 (45 MHz in 1710-1755 MHz band); ¶ 52 (40 MHz in 2110-2150 MHz band). Although the Educators do not hold licenses for spectrum in the 2150-2162 MHz bands, this band, currently allocated to MDS Channels 1 and 2, is an essential component of the two-way systems now being designed and implemented by commercial MDS entities. Accordingly, neither this band, nor the upper 2 MHz from 2160-2162 MHz, should be reallocated for 3G mobile use. See *Id.* at ¶ 55.

appears to be sufficient spectrum at present, or which can be made available in the near term, in which to place mobile transmitters for advanced wireless services.²⁰

VI. Conclusion

For the reasons expressed herein, the Educators urge the Commission not to disturb the existing allocation or use of the ITFS/MDS spectrum, and to choose an alternative that does not involve reallocation or displacement of ITFS/MDS licensees for the implementation of 3G services.

²⁰ 120 MHz of the spectrum identified above is already allocated to PCS (1850-1910/1930-1990 MHz). However, it is anticipated that some of the demand for mobile 3G services will be satisfied through in-band migration of existing PCS systems to 3G. In addition, the PCS C and F blocks, constituting 40 MHz of this allocation, already have been reauctoned. *Id.* at ¶ 37. Therefore, it is appropriate to count this spectrum towards the bandwidth for 3G.

*Comments of Eureka College and the
Illinois ITFS Educators*

Respectfully submitted,

Eureka College

By: 

James T. Flynn, Jr.
Chief Financial Officer
Eureka College
300 East College Avenue
Eureka, IL 61530
Tel: 309-467-6306
Fax: 309-467-6304

On behalf of itself and the organizations listed in the
attached Appendix A.

February 22, 2001

Appendix A
Illinois ITFS Educators

Beardstown Community Unit Sch. Dist. #15
James Lewis
101 East 15th Street
Beardstown, IL 62618

Dakota Community U.S.D. #201
James Fields
400 Campus Drive P.O. Box 128
Dakota, IL 61018-0128

Eastland Community U.S.D. #308
Connie Lower
200 South School Street
Lanark, IL 61046-1354

Edinburg Community Unit School Dist. #4
Doug Foster
100 East Martin Street
Edinburg, IL 62531

Franklin Community Unit School Dist. #1
Fred Roberts
107 North School Avenue Box 140
Alexander, IL 62601

Heartland Community College
Kathleen Collins
1226 Towanda Avenue
Bloomington, IL 61701

Hutsonville C.U.S.D. #1
Roger Eddy
P.O. Box 218
Hutsonville, IL 62433

Midstate College
R. Bunch
411 W. Northmoor Road
Peoria, IL 61614-3558

Morrisonville Community Unit District #1
Daryl McManus
301 School Street P.O. Box 13
Morrisonville, IL 62546

Parkland College
Tom Ramage
2400 W. Bradley Avenue Room X-134
Champaign, IL 61821-1899

Red Hill Community Unit School Dist. #10
Paul Tougaw
1250 Judy Avenue
Bridgeport, IL 62417

Scott-Morgan Community U.S.D. #2
Robert Rogers
100 West Rockwood Street
Bluffs, IL 62621

South Fork School District #14
Art Anthony
Box 20612 Dial Street
Kincaid, IL 62540

Waverly Community Unit School District #6
Barbara Smith
201 North Miller
Waverly, IL 62692